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|-------------------------------|------------------------|---------------------|--|
| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                               | 09/626,106             | MORIMOTO ET AL.     |  |
|                               | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                               | Bernard E Souw         | 2881                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/08/2004.
2. ☒ The allowed claim(s) is/are 2-20 and 22-24.
3. ☒ The drawings filed on 26 July 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                       |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.  |

## DETAILED ACTION

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this Examiner's Amendment has been given during a phone conversation with applicant's attorney, Mr. John R. Mattingly, Reg. No. 30,293, on November 26, 2004.

(a) **In the specification:**

► On page 49, line 4, prior to ", (A)", delete [Fig. 8] and insert **--Fig. 7--**.

(b) **In the claims:**

► In claim 2, page 3, line 1, after "*movement mechanism*", prior to "*for performing*", insert **-- *other than a piezoelectric element movement mechanism* --**.

► Still in claim 2, page 3, line 10, after "*operation of said*", prior to "*piezoelectric element*", insert **-- *single* --**.

► In claim 4, page 4, line 2 from bottom, after "*movement mechanism*", prior to "*for performing*", insert **-- *other than a piezoelectric element movement mechanism* --**.

► In claim 5, page 6, lines 4-5, after "*sampling position,*", prior to "*in tandem*", delete [*a separately provided auxiliary movement mechanism makes said probe move*] and insert **--*said probe moves*--**.

- ▶ In claim 6, page 6, line 5, after “*said sample by*”, prior to “*the*”, delete [on].
- ▶ Still in claim 6, page 7, lines 1-2, after “*movement mechanism*”, delete [and said *first piezoelectric element functions as an auxiliary movement mechanism*].
- ▶ In claim 8, page 8, line 13, after “*scan area*”, prior to “.”, insert --***with other than a piezoelectric element movement mechanism***--.
- ▶ In claim 14, page 10, line 11, after “*movement mechanism*”, prior to “*for making*”, insert -- ***other than a piezoelectric element movement mechanism*** --.
- ▶ In claim 16, page 12, line 1, after “*movement mechanism*”, prior to “*is performed*”, insert -- ***other than a piezoelectric element movement mechanism*** --.
- ▶ Still in claim 16, page 12, line 11, after “*auxiliary*”, prior to “*class*”, delete [micron] and insert -- ***micrometer*** --.
- ▶ In claim 19, page 13, line 3 from bottom, after “*movement mechanism*”, prior to “*for making*”, insert -- ***other than a piezoelectric element movement mechanism*** --.
- ▶ In claim 22, page 16, line 2, after “*movement mechanism*”, prior to “*for making*”, insert -- ***other than a piezoelectric element movement mechanism*** --.

***Examiner-Initiated Interview***

2. An Examiner-initiated telephone interview with applicant's attorney, Mr. John R. Mattingly, Reg. No. 30,293, has been conducted on November 26, 2004, and resulted in the Examiner's Amendment stated above.

***Applicant's Amendment***

3. The Amendment filed 11/08/2004 has been entered. The present Office Action is made with all the arguments being fully considered.

Claims 2-20 and 22-24 remain pending in this office action.

***ALLOWANCE***

4. Claims 2, 4, 8, 14, 16, 19 and 22 are allowed.

Claims 2, 4, 8, 14, 16, 19 and 22 are subsequently renumbered to claims 1-22.

***Reasons for Allowance***

5. The following is an examiner's statement of reasons for allowance:

A scanning probe microscope apparatus or measurement method, in which a scanning piezoelectric element is used for micrometer-class, or narrow area, scanning, and a movement mechanism other than piezoelectric element is used for millimeter-class, or wide area, scanning, as recited in claims 2, 4, 8, 14, 16, 19 and 22, is neither anticipated nor rendered obvious by any prior art.

Claims 3, 5-7, 9-13, 15, 17, 18, 20 and 22-24 are also allowed because of its/their dependencies, either directly or indirectly, upon claims 2, 4, 8, 14, 16, 19 or 22.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Relevant Prior Art***

7. This prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

► USPAT # 5,200,617, issued on 04/06/1993 to Hayes et al., and also USPAT # 5,103,094 and USPAT # 5,173,605, both also issued to Hayes et al., are found to claim the same subject matter of wide/mm-class and narrow/ $\mu$ m-nm-class scan ranges, as claimed in the present disclosure, however, with the difference that Hayes's scanning probe microscope or method uses the same piezoelectric principle for both wide and narrow scan ranges, as shown in Fig.3B by the inner piezoelectric element 37 for large scan range and the outer piezoelectric element 39 for narrow scan range.

► US RE37,560E, issued on 02/26/2202 to Ellings, is found to claim the same subject matter of wide/mm-class and narrow/ $\mu$ m-nm-class scan ranges, as claimed in the present disclosure, however, with the difference that Ellings's scanning probe microscope or method uses a single piezoelectric element for both wide/mm-class and

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narrow/ $\mu$ m-nm-class scan ranges, but driven by different algorithms for small, medium and wide scan ranges, as recited in Col.12/ll.5-8, more specifically in Col.12/ll.9-67 & Col.13/ll.1-25 for narrow scan range, in Col.13/ll.26-46 for medium scan range, and in Col.13/ll.47-67 for wide scan range.


### ***Communications***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard E Souw whose telephone number is 571 272 2482. The examiner can normally be reached on Monday thru Friday, 9:00 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571 272 2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications as well as for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

bes  
November 26, 2004

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800